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Exports and American divergence. Lost decades and Emancipation collapse in Latin American and the Caribbean 1820-1870.

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The period 1820-1870, or 'lost decades', is widely regarded as the key moment in the opening of gap between Latin America and the United States. We test this statement with a new set of export series. We show that the performance of Latin American countries was quite good, although not outstanding. Mexico was hit by foreign policy crisis, but the only real basket case have been the British and French colonies in the Caribbean. The emancipation of slaves caused a collapse in their exports, favoring other tropical countries, including Cuba and Brazil. Further South, independent countries such as Argentina and Chile increased their share of world trade. In a nutshell, most of the divergence in the 1820-1870 in the Americas was between tropical countries rather than between Latin America and North America.

Keywords: International Trade, Latin America and the Caribbean, Early Nineteenth century, Independence and Emancipation.

JEL Classification: F14, N10

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The period 1820-1870, or 'lost decades', is widely regarded as the key moment in the opening of gap between Latin America and the United States. We test this statement with a new set of export series. We show that the performance of Latin American countries was quite good, although not outstanding. Mexico was hit by foreign policy crisis, but the only real basket case have been the British and French colonies in the Caribbean. The emancipation of slaves caused a collapse in their exports, favoring other tropical countries, including Cuba and Brazil. Further South, independent countries such as Argentina and Chile increased their share of world trade. In a nutshell, most of the divergence in the 1820-1870 in the Americas was between tropical countries rather than between Latin America and North America.

1. Introduction

The Mexican president, Porfirio Diaz, said once 'Poor Mexico, so far from God and so close to the United States'. In economic history, this statement holds true for the whole continent South of the Rio Grande. Its economic performance is routinely compared with the American one and the results are not flattering. On the eve of World War One, the average GDP per capita of the whole Latin America was less than a third of the American one (Maddison 2014). Yet in 1500 Mexico and Peru had undoubtedly been richer than North America. The timing of this 'reversal of fortunes' is still uncertain. Acemoglu et al (2002 p.1258) conclude "that the reversal in relative incomes took place during the late eighteenth and early nineteenth centuries and it was linked to industrialization", but this dating is not unanimously shared. The recent estimates by Allen et al (2012) and Arroyo Abad et al (2012, Figure 1) feature a sizeable gap in real wages between North and South America since the late 16th century and push the start of the divergence further back in time: the United States were much richer than Peru throughout the 18th century, almost as rich as Mexico around 1720 and about a quarter

richer around 1780. On the contrary, according to the avowedly optimist view of Dobado (2015), levels of consumption in Latin America were close to Northern American ones (and higher than most European ones) in early 19th century. By definition, the larger the gap in GDP per capita in 1800, the better the relative performance in the 19th century.

These opinions are still based on limited quantitative evidence, in spite of noteworthy recent progress. Data on GDP per capita are available for only some countries, sometimes only for few benchmark years, and the data are sometimes quite shaky. Many scholars have inferred that performance of Latin American countries must have been poor because their political history was very troubled. Others have used as proxy exports per capita, under the assumption that in the early 19th century, exports to the industrializing core were the main or sole source of growth for the periphery (Bates et al 2007, Prados de la Escosura 2009, Bulmer Thomas 2003 and 2012, Bertola and Ocampo 2014). In this paper, we follow this latter tradition, relying on our new estimate of world trade since 1800 (Federico and Tena 2016a). We are able to make two new specific contributions. First, we consider all polities in the Americas, including the Caribbean, which have so far been the subject of a parallel (and similarly pessimistic) literature. Second, we frame the performance of exports from American countries in the growth of world trade during the first globalization (Federico and Tena 2016b).

After a survey of the literature on the ‘lost decades’ (Section Two), in Section Three we present the available data on GDP and trade. The quantitative analysis of export performance suggests a division of South American polities in three groups, which we deal with in more detail in the rest of the paper. Section Four focuses on the performance of major temperate independent countries, which ranged from the decent (Mexico) to the outstanding (Peru). Section Five outlines the massive changes in the world market for tropical products, which featured the rise of Spanish colonies (Cuba and Puerto Rico) and Brazil, as well as of non-American competitors, and the decline of the once-domineering British and French colonies. In Section Six, we discuss how much this latter depended on the effects of slave emancipation. Section Seven concludes.

2. The literature on the lost decades: Independence and Emancipation

The pessimist view suggest three different, but surely not mutually exclusive, mechanisms to explain the poor performance of newly independent countries

First, political fragmentation after independence caused South America to lose all the scale advantages Spanish colonial empire had offered (Bates et al 2007). The common currency and legal system could have helped the development of a single market (Irigoin 2003), and indeed there is evidence of modest convergence of prices inside some regions, although trade between viceroyalties was still limited (Gallo and Newland 2004). In contrast, independence brought national currencies, with different (and often unsound) monetary policies and, in most cases, also protectionism. All the new states increased duties to raise revenue, and high protection settled as a persistent feature of the Latin American history (Coatsworth and Williamson 2004).¹

Second, the Spanish (and, to some extent, Portuguese) rule had left extractive institutions. Spain extracted huge revenues from the empire, the colonies were forbidden to trade with foreign countries and trade with Spain was heavily regulated, the colonial society was highly hierarchical, the Church enjoyed a privileged status, and property rights on land were poorly defined and insecure (Coatsworth 1997, 2006, 2008 Mahoney 2010). After independence, trade was liberalized, but other extractive institutions remained, and, if any, the power of the élite grew as it was no longer constrained by the Spanish crown (Coatsworth 1998). In a series of celebrated papers, Engermann and Sokoloff (1997, 2002, 2005 and 2011) have argued that land concentration and the ensuing concentration of local power reduced investments in public goods, such as education and infrastructures, which were critical for long-run sustained growth.

The most common explanation of the divergence, however, points to the dysfunctional politics of the newly independent countries: “In the half century following independence the presence of widespread political instability and violence distinguished much of Latin America, especially Spanish America, from the United States” (North et al. 2000, p.28). They were plagued by constant political turmoil, which often erupted in civil and foreign wars. Spain made steady efforts to reconquer its colonies until well into the

¹ Duties on British cotton goods from main Latin American countries (Argentina, Brazil, Chile , Colombia, Mexico, Peru, Uruguay and Venezuela) were as high as 68% in 1846 and they halved to 32% in 1863 (Tena-Junguito et al. 2012).

1830s and other European powers enforced upon blockades and military interventions to defend their markets and their geostrategic influence. Mexico was particularly hit because of its location. It lost Texas in 1836 and then half of its remaining territory in 1846-1848 to the United States, and on top of this, was twice invaded by the French, in the so-called Pastry War of 1838-1839 and again in 1861-1867. But all countries were affected by wars: Centeno (1997 Tab 1 and 2) lists 10 foreign wars for Argentina, 6 for Brazil, 5 for Uruguay and Mexico, 4 for Chile and 3 for Colombia. War-related deaths peaked during the independence wars, but remain high until 1870 (Bates et al 2007 Table 1). Also political violence is deemed largely a colonial legacy (North et al 2000). The states fought over borders and social groups and regions within each state strove for power in order to defend or expand their privileges. This climate of violence was bound to discourage foreign and domestic investments and harm growth. Furthermore, wars were expensive: between 1822 and 1860, military expenditures averaged between 50 to 77 percent of total budgets in Latin America (Centeno 1997, Tab.2 and Halperin 2008/1969 pp.136-138). The situation started to improve in the 1860s. In most countries, civil wars had ended and liberal political forces had taken office, abolishing most of the “ancient regime” rules affecting land and internal customs but also implementing modern commercial and civil codes (Stein and Stein 1970). On the other hand, liberal reforms reduced franchise and stripped the native community of their residual powers and the export boom increased inequality.

The pessimistic view of the ‘lost decades’ has not gone unchallenged.² Dye (2006) reminds that institutional framework of post-independence countries was complex and not uniformly bleak. Chile combined a prosper economy with a stable government after Independence (see Rector 1986 and Salazar and Pinto 2003). Argentine experienced a soft institutional transition because the free trade interest in Buenos Aires overcome easily the opposition from land owners from inland states (Amaral 1993). On a more general vein, Llopis and Marichal (2009, p.12) point out that the slow growth after Independence was anyway better than the even more disappointing growth of Spain and Portugal in the early 19th century. The most consistent critic of the pessimistic view is Prados de la Escosura (Prados de la Escosura and Amaral 1993 Prados de la Escosura 2009). He admits that the end of transfers to Spain did not compensate the losses from

² Grafe and Irigoin (2006, 2008) and Irigoin (2015) have questioned the traditional view of the Spanish empire as extractive.

fragmentation of the market and from the post-independence political turmoil, but he argues that on balance the new countries gained thanks to the new opportunities for exports to Europe after the liberalization of trade. Other authors are more cautious, suggesting that the positive effect of exports was not large enough to lift whole continent off and that growth concentrated in the coastal regions (Bulmer-Thomas 2003), which had easier access to foreign markets (Bertola and Ocampo 2014 pp. 75-79).

Dysfunctional institutions or political turmoil cannot explain the evolution of the Caribbean, as all islands but Hispaniola (Haiti and Dominican Republic) remained European colonies throughout the period. The conventional wisdom is thoroughly pessimistic: the islands were badly hit by the abolition of slavery and did not recover until the end of the century. The traditional interpretation, as shaped by Williams (1944), considered the abolition a consequence of an irreversible economic decline of the plantation system, but this view is no longer accepted. Drescher (1977, 1999) has argued that the plantation system was as efficient in the Caribbean as in the Southern United States (Fogel and Engerman 1973, Fogel 1989) The abolition was an ‘economic suicide’, as it disrupted the system and caused a collapse in production and exports. This collapse helped exports of other tropical producers in the Americas, but this link has been totally overlooked so far.

3. Measuring the performance of the Americas: GDP and wages

Table 1 reports the data on GDP per capita at constant prices for in American polities in 1800, 1820 and 1870 and the corresponding rates of change according to Maddison and to the two main comparative studies on Latin American polities during the ‘lost decades’

Table 1
GDP per capita and growth (1990 PPP \$) in the Americas

	Maddison				Prados de la Escosura			Bertola and Ocampo		
	1800	1820	1870	rate	1820	1870	rate	1820	1870	rate
Canada		904	1695	1.26						
USA	1296	1361	2445	1.17	1257	2445	1.33			
Argentina	931	998	1468	0.77	1249	1837	0.77	998	1468	0.77
Brazil	683	683	713	0.09	652	680	0.08	597	694	0.3
Chile	626	605	1290	1.51	607	1295	1.52	710	1320	1.24
Colombia	591	533	676	0.48	423	539	0.48	607	676	0.22
Cuba	503	644	927	0.73	583	838	0.73	695	1065	0.85
Mexico	836	627	651	0.08	695	720	0.07	733	651	-0.24
Uruguay	1088	1165	2181	1.25	1004	1880	1.25			
Venezuela	415	375	570	0.84	347	529	0.84	460	570	0.43
Jamaica		701	530	-0.56						
8 core countries		639	794	0.43						
15 L. America		667	674	0.02						
21 Caribbean		636	549	-0.3						
L. America		628	776	0.42	648	813	0.45	684	772	0.24
World		712	884	0.43						

Sources: Maddison (2014) ; Prados de la Escosura (2009 Tab. 6); Bertola and Ocampo (2014)Tab A.1 and 2.4

The initial GDP figures tally well with the view by Allen et al (2012) and Arroyo Abad and Van Zanden (2012) about the size of income gaps at the end of the colonial period³. Subsequent changes, in spite of the differences among estimates, are broadly consistent with the conventional wisdom. They do show a substantial variance in rates among countries. Chile and Uruguay matched the growth of the United States, but the performance of the two largest economies of the continent was disappointing, to say the least. Mexican income stagnated according to Cardenas (1997) and Salvucci (1993) and declined according to Coatsworth (1978, 2005). The rates for the Caribbean, if cumulated over fifty years imply a fall by 15% in GDP for the whole area and by 30% in Jamaica only. Some very recent works offer a more optimistic view of the economic performance of the Americas. The new estimates of GDP by Lindert and Williamson (2016) imply a substantially higher level of GDP per capita and a faster growth before

³Arroyo Abad and Van Zanden (2014) suggest a slightly lower figure for Mexico (813 dollars) and put forward an estimate for Peru (665 dollars) in 1800.

the civil war (with a decline in the 1860s)⁴. The GDP per capita declined over the whole period 1820-1870 in Venezuela, but grew quite fast in Brazil and Peru.⁵ Unfortunately, these GDP data are tentative at best and incomplete and indeed are corrected by the results of more recent work.

Some authors have suggested to use real wages as proxy of GDP. This approach is correct only under strict conditions (see Broadberry et al 2014) and anyway the results for Mexico City (Challú and Gomez-Galvariato (2015) and Lima (Arroyo Abad, 2014) are not clear cut. Real wages of unskilled workers fluctuated a lot without any long-term trend. In both countries, wages hit a trough during the independence war, recovered in the 1830s and 1840s and fell sharply in the 1850s and 1860s, but the size of the fluctuation is much greater in Lima than in Mexico City.

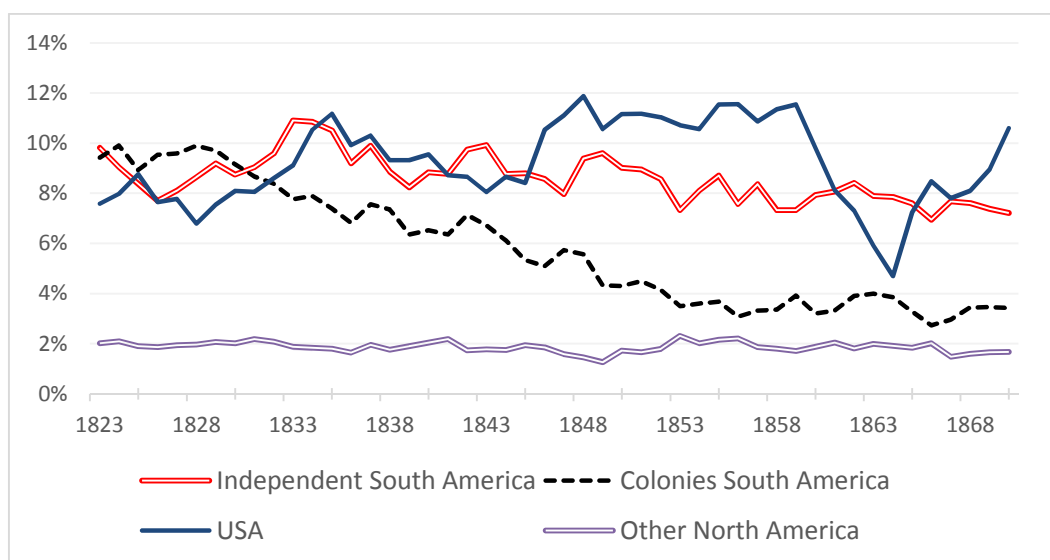
4. Measuring the performance of the Americas: exports

Our data-base includes yearly series of exports at current and constant prices for all 43 American polities since 1820 and, since 1823, 18 polities in other continents (Federico and Tena 2016a). Jointly, these 62 polities (henceforth ‘world’) accounted for about four fifths of world exports in 1850 and in 1870. From 1823-25 to 1869-1871, ‘world’ trade grew by 5.5 times, while American exports increased only by four times. The American share (at current prices) remained slightly below 30% until the mid 1830s, declined slowly to about a quarter on the eve of the American Civil War and collapsed to about 20% in the 1860s and recovered only towards the end of the century. Figure 1 plots separately the United States, as the implicit yardstick of the whole continent, the other North American countries (i.e. mostly Canada), the colonies (almost totally coinciding with the Caribbean) and the independent countries, which included Mexico, Brazil and Argentina, jointly accounting for about 60% of the total.

⁴ They estimate the rate of change as 1.4% in 1800-1860 (partially to recover from the ravages of the Independence war) -0.3% in 1860-1870 and 1.16% over the whole period 1800-1870. The figures of GDP in 1990 Geary-Khamis dollars (1930 in 1800, 3250 in 1860 and 3100 in 1870) can be obtained by multiplying the British data by the authors’ estimates of the difference between the two countries.

⁵ The rates, all computed from three-year moving averages, are -0.3% for Venezuela, 1831-1870 (De Corso 2013), 1.2% for Brazil (Tombolo 2013) and 1.7% Peru 1825-1870 (Seminario 2015). The GDP per capita in Peru was higher in 1870 than on the eve of World War One.

Figure 1
Shares on 'world' trade, current prices



Sources: Federico-Tena (2016a)

Shares of the independent countries and the other North America remained broadly constant in the long run. The United States managed to increase their share of world trade until the Civil war, thanks to the almost parallel increase of exports of tobacco and cotton from the South and wheat flour and cotton manufactures from the North.⁶ The decline of America's share on 'world' trade reflects the collapse of exports from the colonies in the 1830s and early 1840s (partially compensated by the rise of exports from the United States) and of exports from the Southern USA during the civil war and its aftermath.⁷

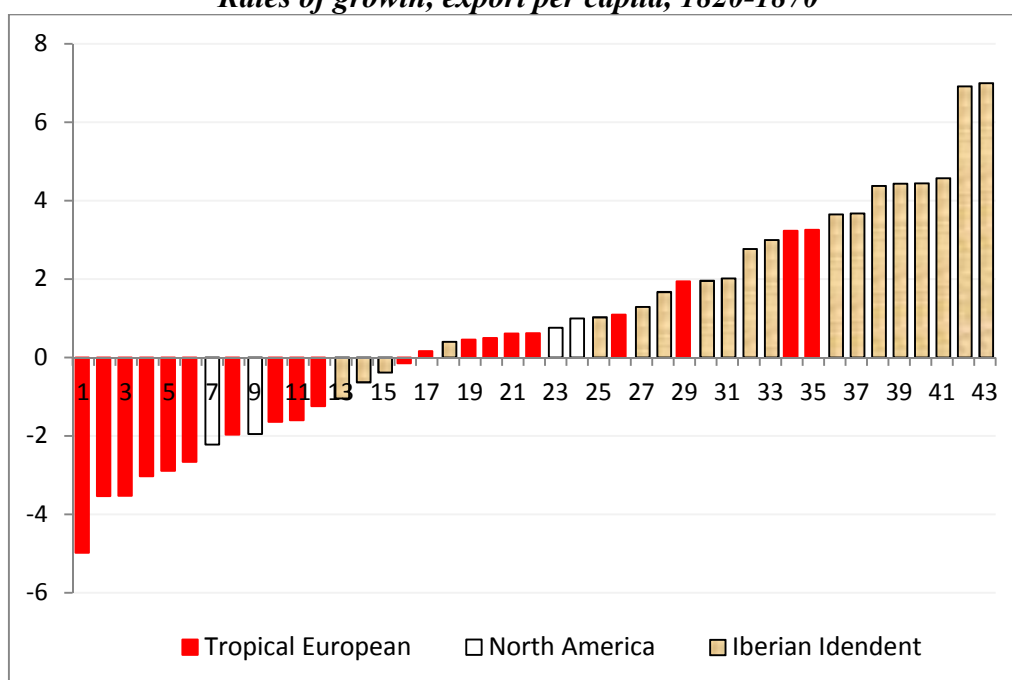
These shares, although informative, may give a biased view of the performance to the extent that total export depend also on the size of the economy – i.e. on population and GDP per capita. As said, the available data on this latter are quite uncertain, while our

⁶ Tobacco and cotton accounted for about a half of American exports (and for 6-8% of world trade) from the 1820s to the eve of the Civil war, with a peak of almost two thirds in the 1830s. Exports from the North were more diversifies – wheat (wheat flour) and cotton manufactures increased in the 1850s and 1860s (data from Historical Statistics of the United States 2006 series Ee 571, Ee 573, Ee575-576).

⁷ The decline of share of Southern USA accounts for 140% of the decline from 1858-60 to 1868-1870. Exports from Northern America (defined as total exports less cotton and tobacco) increased from 5.6% to 6.7% of world trade.

estimates suggest that the population of Americas with the notable exception of European (non Spanish) colonies grew faster than the world population.⁸ Indeed, as Figure 2 shows, thirty five out of American countries, including the United States, underperformed the rest of the world in terms of rate of growth of export per capita (3.6 %).⁹

Figure 2
Rates of growth, export per capita, 1820-1870



Sources: The corresponding numbers with countries and groups are showed in Table 1 Appendix.

Export per capita declined in sixteen polities and all of them but three (Dominican Republic, Porto Rico and Uruguay) were European colonies. All eight success stories were independent countries, including four out of five Central American tropical countries (Costarica, El Salvador, Guatemala and Nicaragua). Furthermore, only three country-specific rates of growth (Peru, Bolivia and Nicaragua) significantly exceed the world rate.

⁸ The share of Americas on world population almost doubled, from 3.7% in 1820 to 6.4% in 1870, while that of European colonies remained stable around 1.3% (data from Federico and Tena 2017).

⁹ We compute the rate of change of the i-th series as $w = -\beta/\psi$, where β and ψ are coefficients from a regression (Razzaque et al 2007) $\Delta \ln W_t = \alpha + \beta \text{ TIME} + \psi \ln W_{t-1} + \phi \ln \Delta \ln W_{t-1} + u$.

These comparisons may be deemed unfair, as they do not take into account the initial level of export per capita. *Ceteris paribus*, it is much easier to increase export per capita starting from a low than from a high level. Indeed, the Americas exported proportionally more than any other extra-European continent before the French Revolution, the value of American sugar exported to Europe was four times larger than total Asian exports, and American exports, including other tropical products and silver from Mexico and Peru, might have been ten times larger (De Vries 2010). In the early 1820s, the differences in export per capita between the Americas and the rest of the world, and among different groups of polities within the Americas, were still very wide (see Table 2).

Table 2
Export per capita in 1823-1825 (1913 \$)

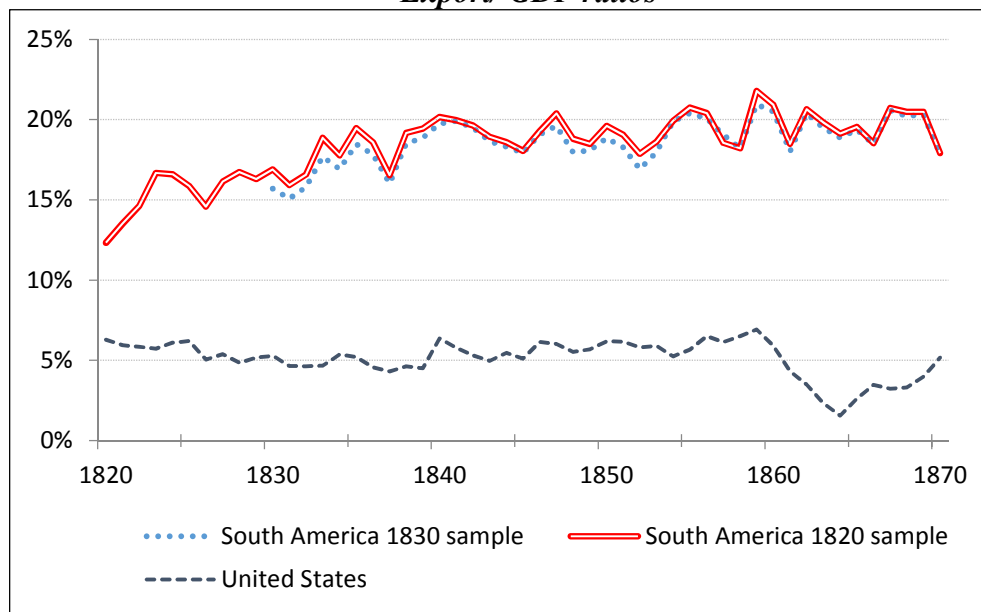
Americas	5.31	North America	7.30	USA	5.73
Asia	0.27	Independent Temperate	2.38	Mexico	2.20
Europe	1.93	Independent tropical	3.32	Brazil	3.48
Oceania	1.79*	Spanish colonies	7.22	Cuba	7.77
World	1.36	European colonies	26.81	Jamaica	29.40

*1826-1828. Source: Exports Federico and Tena (2016a) and population Federico and Tena (2017)

Only the five Central American independent countries exported less than the average of the rest of the world without the Americas (0.93 1913 dollars), while the average exports per capita of “European colonies” in the 1820s exceeded exports per capita of 93 of 130 polities in 1913. The decline of their exports in the next half a century greatly reduced but did not close the gap: in 1869-1871, export per capita from the (other) European colonies were ‘only’ 80% higher than the average of the rest of the continent, rather than five times higher as in the early 1820s. In the following, we will discuss in more detail the causes of these differences in export performance among the different groups of polities.

Before that, it is necessary to ask how much representative are exports per capita of overall economic growth. As said, most authors deem the growth in export per capita as an upper bound of GDP growth. It is possible to test this hypothesis for seven South American countries (Argentina, Brazil, Chile, Colombia, Cuba since 1820, Peru since 1826 and Venezuela since 1830) and for the United States since 1820 (Federico and Tena 2016b). In all of them, but Brazil (and the United States) the export/GDP ratio at current prices rose in the long run. The size of the increase and its time pattern differ somewhat across countries but in all cases but Argentina and Cuba, the increase concentrates in the early decades. Indeed, the aggregate ratio (Figure 3) grew in the 1820s and 1830s and remained essentially flat thereafter. Note how these countries were much open than the United States throughout the period, even if their export per capita were 20% lower.

Figure 3
Export/ GDP ratios



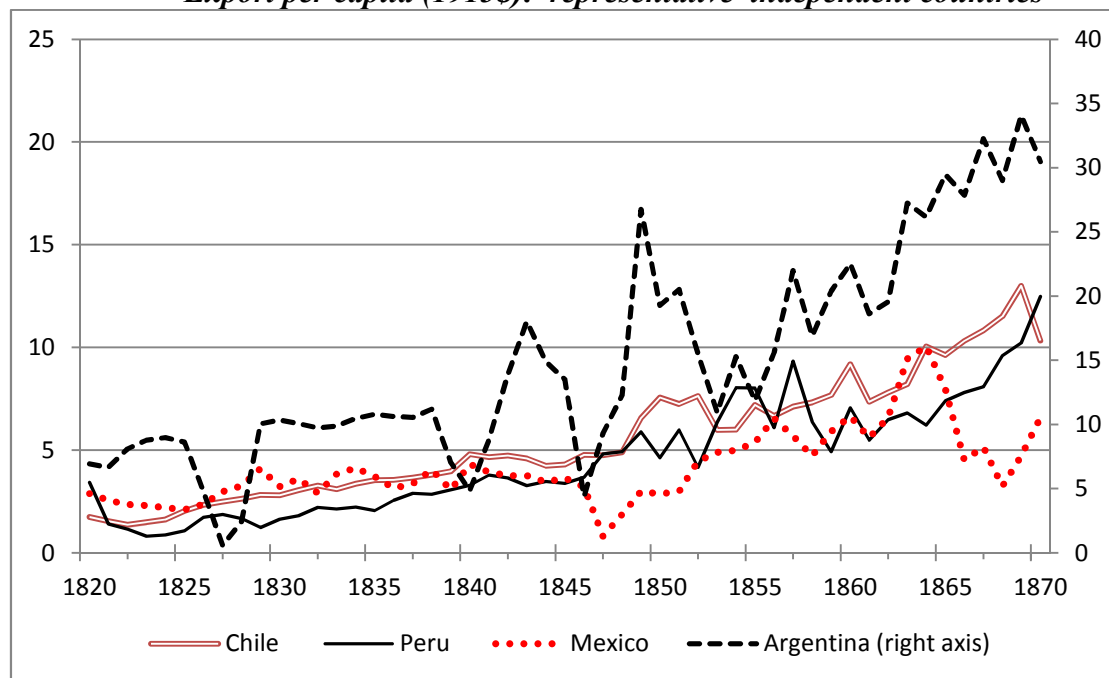
Sources: Federico-Tena (2016b)

One can tentatively conclude that, at least for these countries, export per capita do overestimate the growth in GDP per capita, but mostly in the initial period. Furthermore, these countries performed better than the average, and five of them were in the upper third of the list of polities from Figure 2. It is unlikely that the export/GDP increased much in other countries, and in especially where exports per capita declined

5. The lost decades? Mexico and the temperate independent countries

In the previous Section, we have hinted that independent countries performed quite well in the ‘lost decades’. Indeed, colonies which before Independence had already combined their participation to the domestic colonial market with a greater openness to metropolitan and world market, such as Chile, could exploit well the opportunities of the globalizing post-Waterloo world (Gellman 2009). However, this was not necessarily the case of Mexico, the most populous Latin American countries from independence to the 1860s. Colonial Mexico exported mostly silver and it was around two thirds of world total silver around the turn of the 18th century (Dobado-Marrero 2001, p.285). Mining was hit hard during the independence war and production in the 1820s was about half the pre-war level (Cardenas 1997 Tab.1). It recovered very slowly in the 1830s and in the first half of the 1840s, but then the recovery accelerated in the second half, with an overall yearly growth rate of 2.2 in the period 1821-1850 (Sánchez-Santiró 2009 p.81). Indeed, our series of export per capita (Figure 4), based on the new estimates by Kuntz and Tena (2017), show a long-term upward trend, with an acceleration in the 1850s and the early 1860s and deep crises during the war with the USA and in the second half of the 1860s.

Figure 4
Export per capita (1913\$): representative independent countries



Sources: Federico-Tena (2016a)

The overall growth raise doubts about the conventional wisdom on the alleged poor performance of the Mexican economy during the ‘lost decades’. Historians attributed it to domestic political instability, featuring military coups and popular uprising, and not just to the colonial heritage (see Bates et al 2007 and Dobado et al 2008). In contrast, Sánchez-Santiró (2009) has recently argued that these were mostly urban and short-lived events, which did not affect the rest of the economy, at least until the second half of the 1850s. Our series support this latter view – suggesting that export collapsed in coincidence with and thus probably because of external crises. Furthermore, trends tally fairly well with the population growth estimates by McCaa (1993), the real wage series by Challu and Gomez-Alvariato (2014) and the evidence about the resilience of subsistence agriculture, which employed the vast majority of the population, fared better than mining or commercial agriculture (Tutino 1986, Cardenas 1997).

Figure 4 plots exports per capita for the three other largest temperate independent countries. They all were success stories, in spite of a rather different post-independence political history. North et al (2000) single out Chile, jointly with Brazil, as a haven of political stability and indeed the country attained the highest rate of GDP growth in the ‘lost decades’ (Tab 1). It was a classic case of export-led growth, fueled by the discoveries of silver veins and of accessible deposit of copper which production rose from 1.5 million kg before independence to around 18 million kg in the 1850s (Llorca-Jaña 2012). From the early 1820s to 1870, export increased by 14 times (by 6.1 times in per capita terms) and Chile tripled its share of the world exports, from 0.23% to 0.68%.

The two other countries did not enjoy any political stability. North et al (2000 p.45) quote Peru, alongside Mexico, as the ‘archetypal’ cases of dysfunctional institutions. Argentina waged several wars, which caused blockades to the harbor of Buenos Ayres (by the Brazilian in 1826-1828, the French in 1838-1840 and the Anglo-French in 1845-1848), that caused temporary collapses in export (Figure 3). Yet, both countries succeeded to increase their share of world exports during the ‘lost decades’, respectively from 1.12% to over 1.79% and from 0.21% to 0.46%. Argentina exported salted meat, hides and wool, and the boom of exports reflects expansion of cattle raising on the land seized from the natives. The acreage for pasture tripled, the number of cattle and the cattle herd expanded from 1 million to 6 million in addition to 38 million of

sheep (Gellman 2009, p.36). The case of Peru is slightly different as unlike Argentina or Chile, it changed its main staple. Colonial Peru was to some extent similar to Colonial Mexico: it developed internal market around mining cities and exported mostly silver to Spain (Contreras and Cueto 2004). As in Mexico, production of silver plummeted during independence war (Arroyo Abad 2014). By 1840, it was back at pre-war levels, but since then it stagnated and silver was substituted as main staple by guano and other minor commodities such as saltpeter and wool after 1850 (Hunt 1984)). The growth of exports caused GDP to rise fast, but real wages stagnated after the 1850s: most of the gains of the guano boom accrued to the rich (Arroyo Abad 2014).

It would be possible to continue this description considering other countries, but the message is clear. Most independent (non-tropical) countries managed to exploit the growth of world demand during the first globalization and exports were the main driver of their economic growth. Political turmoil and poor institutions did not necessarily prevent success on the world market.

5. The Americas and the competition on the market for tropical products

In the previous Section, we have dealt with each country separately because each of them was a fairly small player in world markets for its staple, with the possible exception of silver and the sure exception of Peruvian guano. This approach is not suitable for the polities located between the two Tropics. They exported almost exclusively tropical products (Table 4 a) and until 1830, they dominated the world market (Table 4 b). The European tropical colonies supplied 60% of sugar (and Brazil and Spanish colonies a further 30%), Brazil, the Spanish colonies, the British and French colonies and the independent American countries (including Haiti) a fifth of coffee consumption each and the Southern United States two thirds of world cotton (and all other American polities and additional sixth). In the next forty years, American polities lost their dominant position and in 1870 polities other than the United States supplied ‘only’ a quarter of world export of tropical products.

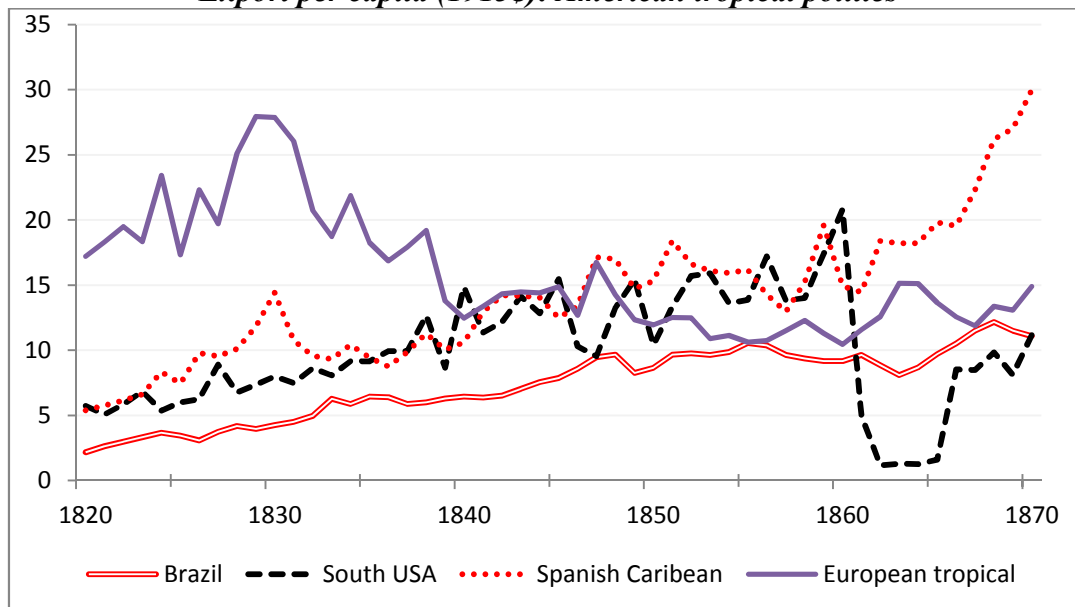
Table 3
The market for tropical goods

	Brazil	British Colonies in America	French colonies in America	Cuba and Puerto Rico	Other tropical countries	USA	Other Non tropical producers
Share of tropical products on total domestic exports							
1830	78.4%	100.0%	100.0%	92.7%		62.4%	
1850	84.1%	100.0%	100.0%	93.8%		78.2%	
1870	85.9%	100.0%	100.0%	97.9%		78.6%	
1913	90.3%	100.0%	100.0%	94.1%		36.4%	
Share of polity on world trade of tropical goods							
1830	8.8%	17.7%	5.1%	8.4%	26.3%	17.6%	16.2%
1850	12.2%	5.2%	1.9%	9.8%	28.9%	29.4%	12.4%
1870	9.9%	3.9%	1.5%	10.4%	33.5%	28.5%	12.4%
1913	12.4%	1.5%	0.5%	7.5%	39.4%	29.1%	9.7%

Source Federico and Tena (forthcoming)

Trends in export per capita confirm the stark contrast between the collapse of the European colonies and the rise of other suppliers (Figure 5).

Figure 5
Export per capita (1913\$): American tropical polities



Sources: Federico-Tena (2016a)

The rise of export per capita from the Southern United States reflects the four-fold growth of exports of cotton, from 280 million pounds in 1830 to 1,424 in 1860 and the doubling of export of tobacco, from 82 to 164 million pounds (Historical Statistics USA 2006 series Ee 570 and Ee572). This success thus was independent from the crisis of the European tropical colonies, which in 1830 did not export tobacco and accounted for only 2% of world cotton trade. The export per capita collapsed from 20.8 to 1.1-1.6 during the Civil War, but the Southern United States managed to remain the largest supplier of cotton and tobacco until 1913, with 65% and 31% of world exports (vs 73% and 49% in 1850). Thus, their share of 'world' trade recovered to 4.4% on the eve of World War One.

Export per capita from Cuba and Puerto Rico increased more than fivefold and succeeded in maintaining about 1.5% of world exports from the 1820s to the 1870s, with peaks over 1.7%. Sugar and its derivatives accounted for 55% of total Cuban exports in 1820 and for to over 80% fifty years later, while exports of coffee disappeared (Federico and Tena forthcoming). The output of sugar increased by 14 times (Deer 1949), mostly thanks to substantial investments funded by Spanish and local capital (Dye 1998, Santamaria and Garcia 2004 pp. 177-8). The key innovation was the centralization of processing in large steam-powered mills (called Central) which crushed the cane of several plantations, and the construction of sugar plantation railways to carry the highly perishable cane from the fields to the factory. This strategy paid off, as the Spanish colonies increased their share on world sugar exports from 15% in 1830 to 38% in 1870 (Federico and Tena 2016c). Our constant market share analysis shows that this success would have augmented their share on total world exports by half a percentage point, had not it been more than compensated by a decline in the share of sugar on world trade,

Brazil followed a different development path, which featured a change in specialization and a shift in location of the production for exports from Bahia, Pernambuco in the North-East to Rio, San Paulo and Minas Gerais in the South (Leff 1973 and 1997, Klein and Vidal Luna 2010). In the early 1820s, sugar accounted for about a quarter of total exports, coffee for about a fifth and cotton for a sixth (Absell and Tena 2016). In the next half a century, exports of cotton remained constant (with a spike in the 1860s and early 1870s, exports of sugar increased by 2.5 times (peaking in the mid-1850s) and exports of coffee by almost twenty times. Coffee

overtaken sugar as main Brazilian staple around 1830, and grew up to half or more of all exports from the 1850s onwards. The Southern states had a favorable climate, a lot of fertile land and a 'vast informal credit market' (Frank 2005), but the growth of coffee production was initially hampered by poor infrastructure and high transportation costs (Klein 1990). However, the bottleneck was solved by the construction of railways in the 1860s, meeting the requests by the coffee planters (Summerhill 2005 and 2006). This development path was initially very successful: Brazil export per capita fourfold from early twenties to 1850's and almost doubled its share of world exports, from 2.2% in the late 1820s to (almost) 4% thirty years later. The gains in markets for tropical products account for all the growth in the share of Brazil on world trade in those years (Federico and Tena 2015c). From 1850 to 1870, Brazil broadly succeeded to maintain its share on world market of tropical products, but lost competitiveness on non-tropical exports (minerals) and was hit by changes in the composition of world trade. Thus, at the end of the 'lost decades' its share of world market was down to about 2.8%.

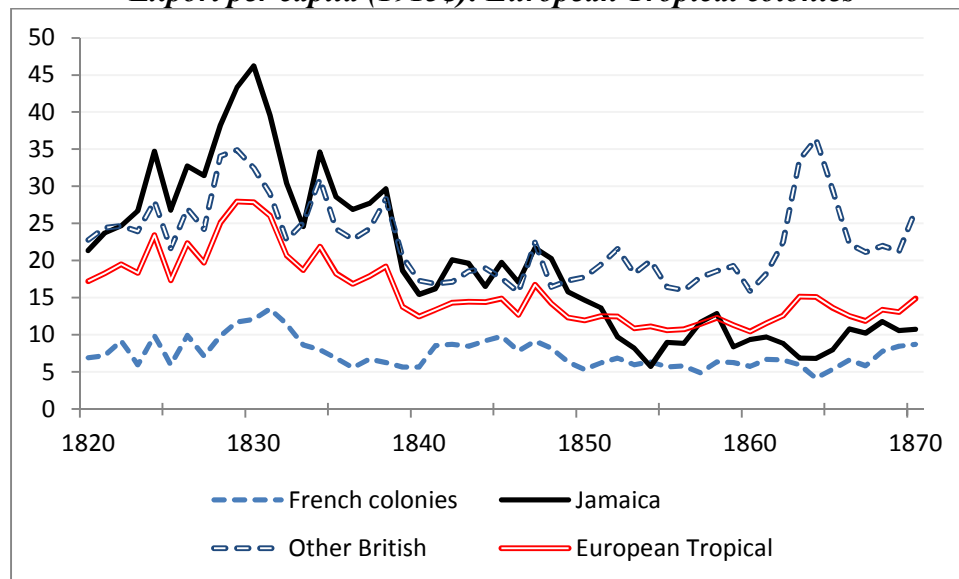
In spite of all differences, these three success-stories share a common trait, the persistence of slavery until the end of the period. In the early 1860s, there were 3.95 million slaves in the United States, up from 1.55 in 1820, 1.5 million in Brazil, up from 1.1 in 1819, and around 400.000 in Cuba and Puerto Rico (Historical Statistics 2007, Klein and Vidal Luna 2010 p.76, Klein 1986 Tab 1 and 2). The growth in Brazilian slave workforce may seem modest relative to the surge in exports, but slaves were increasingly concentrated in the booming Southern states. They accounted for about a third of all Brazilian slaves in 1819 (around 0.4 million) and for about a half in 1872 (over 0.7 millions). As it is well known, slavery was abolished in the United States in 1865, and this marked the start of its demise in the whole Western Hemisphere. It was abolished in Puerto Rico in 1873, and the Spanish and Brazilian governments approved the so-called free-womb laws (the Moret Law, 1870 and the Rio Branco Law in 1871) which freed all children of slaves (Schmidt-Nowara 2010). Import of slaves had been outlawed in Puerto Rico since 1844, in Brazil since 1850 (after a bombardment by the Royal Navy) and in Cuba since 1866 and thus these laws implied a gradual withering of slavery. Slavery was formally abolished in Cuba in 1886 and in Brazil two years later, but the system was already collapsing because slaves were leaving in droves the fazendas (Klein and Vidal Luna 2010). By then, Brazil was substituting slaves with

Italian immigrants and its share on the world market of tropical products (i.e. coffee) increased to 12.4% in 1890.

6. The collapse of Caribbean exports and the emancipation

Exports of Tropical European (i.e. British and French) colonies grew quite fast in the 1820s, up to about 45 million (1913) dollars in 1828-1830, equivalent to 6.9% of ‘world’ trade. In the next twenty years, total exports halved to 22 millions, and their share collapsed to about 2%. About two thirds of this collapse is explained by loss market share in tropical products (Federico and Tena 2016c). Exports did recover in the following decades: in 1870 they were about a half higher than in the mid-1850s and in 1913 about 1.6 times higher. Yet, their share on ‘world’ market continued to slide, down respectively to 1.1% and 0.5%. If we consider the export per capita, the picture is pretty much the same. The total European tropical fall from 27.8 dollars in 1830 to 12.4 in 1840 with Jamaica and French colonies falling to less than half in the same period (Figure 6).

Figure 6
Export per capita (1913\$): European Tropical colonies

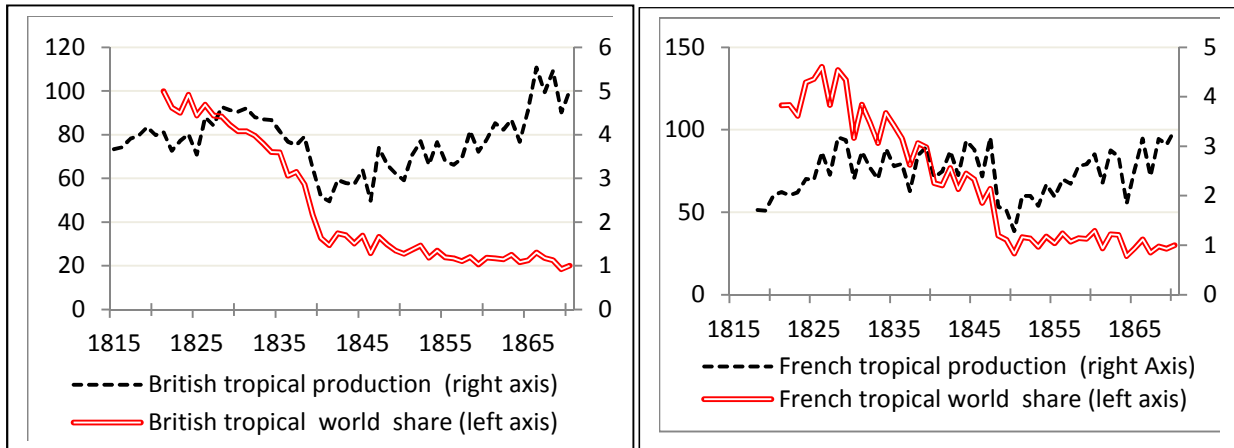


Sources: Federico-Tena (2016a)

The key for this disappointing performance is the export of sugar, which accounted for three quarters of total exports from the British colonies and seven eights from

French ones. Their output of sugar barely grew in the period, while world production increased by 3.5 times (Figure 7).

Figure 7
Output of sugar in British and French colonies and world output share (1870=100)



Source: British and French colonies from Deerr 1949; World from Moreno Fraginals (1978)

The massive fall of production in British colonies in the late 1830s and in France in the early 1850s coincide in time with the abolition of slavery. Slaves in Haiti had successfully revolted in 1791, gaining freedom and independence in 1804, but no other revolt ever succeeded. Slavery in British colonies was abolished on January 1st 1834, but former slaves remained obliged to work on plantations (for a shortened day) and were eventually freed only in 1838 (Green 1976, Fogel 1989 pp.218-233, Drescher 2010). France abolished slavery only in 1848, after the fall of Louis Philippe (Fogel 1989 p. 234, Stauffer 2010) and the Netherlands followed in 1863, after two decades of debates (Den Heijer 2010).

The emancipation was bound to affect negatively the output of plantation crops as it increased labor costs and disrupted the organization of production. The former slaves had to be paid wages above the pre-abolition cost of food and lodging and were less dependable than slaves. Unsurprisingly, exports of all polities, except the Leeward Island, hit the minimum of the whole period 1820-1870 two-three years after emancipation (Table 4).

Table 4
The effects of emancipation on exports of European Tropical colonies

	British Colonies	French Colonies	Dutch Colonies	European Tropical
Before abolition (three year average)	1837	1847	1861	
All time minimum (three year average)	1841	1850	1866	1840
Percentage changes				
All period (1830-1870)	-24.2	12.2	-67.3	-24.9
1830 to all-time minimum	-51.5	-42.5	-69.3	-48.7
Before/after abolition	-33.6	-27.0	-28.2	
Before/after abolition (unweighted average)	-32.9(0.42)	-49.2(0.45)	-19.2(0.85)	
Contribution of Abolition	47.5	50.1	17.4	

Source: Federico and Tena (2016a)

On average, after emancipation exports fell by about a third, although the extent of the decline varied a lot across colonies, as shown by the coefficient of variation of the unweighted averages (in brackets). However, the abolition shock does not explain entirely the poor performance of Tropical European colonies.

First, as the row ‘contribution of abolition’ shows, the shock of emancipation accounted on aggregate for about a half of total decrease. Indeed, total exports from had peaked in 1830-1831 and the stagnation had started much earlier than any plausible threat of abolition: the production of Jamaica, the largest sugar producer in the Caribbean, around 1820 was about a tenth lower than its all time peak in 1806, and in 1830 18% lower than in 1820.

Second, the tropical European colonies recovered rather slowly from the shock: their total exports exceeded permanently the level of the 1830s only in the 1870s and from the 1840s to the eve of world war one, they grew at a paltry 1.26% yearly rate. The loss of market shares in their traditional export products (i.e. mainly sugar) accounts for two thirds of the decline in overall share of exports from British colonies in 1830-1850 and for two fifths in 1830-1870 (Federico and Tena forthcoming). This poor performance contrasts with the experience of other tropical American producers after the abolition of slavery.¹⁰ To be sure, the recovery of exports from the British and French colonies was

¹⁰ Exports from Cuba fell by 42% from 1883 to 1890 but rose at 7.18% from 1890 to 1913. Exports from the Southern United States fell by 44% from 1859 to 1867 and grew at 3.87% thereafter. The post-abolition shock was somewhat smaller but still sizeable in Brazil (10% from 1884 to 1889) but the growth of exports was equally fast (3.49% from 1889 to 1913).

hampered by the loss of the preferential treatment they enjoyed in the United Kingdom and France and by the rise of new competitors. In the United Kingdom, the differential duty for colonial sugar was progressively reduced, down to zero in 1851 (Green 1976 p. 229-230). This was part of the final push towards liberalization of the British market (Curtin 1954), but it might have also been suggested by the rise of real prices of Jamaican sugar under the preferential regime.¹¹

This evidence suggests that even if slave plantation remained highly profitable, the extensive growth which had propelled the British and French colonies in the Caribbean to the status of world-class export powerhouses was no longer sufficient even before the abolition. It is debatable whether they could have increased output relying only on native-born slaves, as the Southern United States. After the emancipation, the sugar islands had two solutions, either to keep their specialization in sugar, and increase productivity as in Cuba, or, like Brazil, to change specialization towards a product, like coffee, which could not be produced in technologically advanced consuming countries and thus less subject to protection and competition. Jamaica did a bit of both towards the end of the century, investing in modern sugar processing plants and increasing the production of bananas (Eisner 1961), but it was too little, too late.

6. Conclusions

In this paper we have argued that the conventional wisdom about the poor performance of Latin American polities in the ‘lost decades’ must be revised because it papers over huge differences among them. The export performance of the former British and French colonies in the Caribbean was indeed very poor, as they never recovered from the emancipation of slaves. Other countries performed much better. Mexico uneven trend and the slope provoked by the US-Mexican war (1847-48) did not confirm such a dismal view as presented by the conventional wisdom. Brazil and the remaining Spanish colonies, as well tropical countries in other continents, benefitted by the collapse of the Tropical European colonies but succeeded to increase exports by

¹¹ The nominal price of Jamaican sugar in London to 1850 Gayer-Rostow -Schartz (1953) and afterwards from Sauerbeck (1986), deflated with wholesale price indexes from the same sources (Mitchell 1988) pp.723-727). The US real prices are computed linking three different series of prices for sugar (Historical Statistics 2006 series Cc218, CC220 and Cc 220) and deflating with index prices Cc113 and Cc124.

investing in sugar production and diversifying in less competitive markets. Further South, other independent countries exploited successfully the growth of world demand for temperate and mining products.

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APPENDIX				
Table 1				
<i>The Americas (by countries and groups) rates of growth of export per capita 1820-1870 (1913\$)</i>				
Label	Countries	Group	Number	Export pc growth
II	URUGUAY	Iberian Independent	15	-0.38
II	COLOMBIA	Iberian Independent	18	0.40
II	VENEZUELA	Iberian Independent	25	1.03
II	PARAGUAY	Iberian Independent	28	1.67
II	MEXICO	Iberian Independent	30	1.96
II	ECUADOR	Iberian Independent	33	3.00
II	CHILE	Iberian Independent	36	3.65
II	ARGENTINA	Iberian Independent	37	3.68
II	BOLIVIA	Iberian Independent	39	4.43
II	PERU	Iberian Independent	41	4.57
TI	DOMINICAN REPUBLIC	Tropical Iberian	13	-1.05
TI	PORTO RICO	Tropical Iberian	14	-0.63
TI	HONDURAS	Tropical Iberian	27	1.29
TI	BRASIL	Tropical Iberian	31	2.02
TI	CUBA	Tropical Iberian	32	2.77
TI	COSTA RICA	Tropical Iberian	38	4.38
TI	EL SALVADOR	Tropical Iberian	40	4.44
TI	NICARAGUA	Tropical Iberian	42	6.91
TI	GUATEMALA	Tropical Iberian	43	7.00
TE	BRITISH HONDURAS	Tropical European	1	-4.98
TE	DANISH VIRGIN ISLAND	Tropical European	2	-3.54
TE	JAMAICA	Tropical European	3	-3.53
TE	GRANADA (Winward Island)	Tropical European	4	-3.03
TE	St.VICENTE	Tropical European	5	-2.89
TE	DUTCH GUAYANA (Surinam)	Tropical European	6	-2.66
TE	FRENCH GUAYANA	Tropical European	8	-1.97
TE	St.BARTHELEMI	Tropical European	10	-1.64
TE	HAITI	Tropical European	11	-1.60
TE	St.LUCIA	Tropical European	12	-1.24
TE	GUADALUPE	Tropical European	16	-0.15
TE	TRINIDAD&TOBAGO	Tropical European	17	0.16
TE	BARBADOS	Tropical European	19	0.46
TE	LEWARD ISLANDS	Tropical European	20	0.50
TE	MARTINIQUE	Tropical European	21	0.61
TE	BAHAMAS	Tropical European	22	0.62
TE	TURK & CAYCO ISLANDS	Tropical European	26	1.09
TE	DUTCH ANTILLES	Tropical European	29	1.94
TE	BERMUDA	Tropical European	34	3.23
TE	BRITISH GUAYANA	Tropical European	35	3.26
NA	NEW FOUNLAND	North America	7	-2.22
NA	St. PIERRE et MIQUELON	North America	9	-1.95
NA	CANADA	North America	23	0.76
NA	USA	North America	24	0.99
	Southern USA			-0.46
	Nothern USA			1.61
Rest of the world				3.59